

## Transition Airspace Resource Management, Phase I

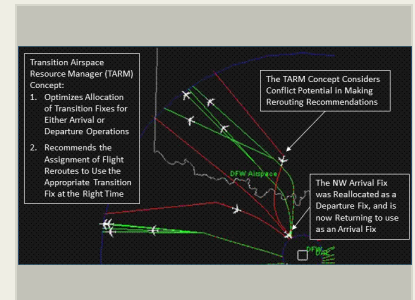
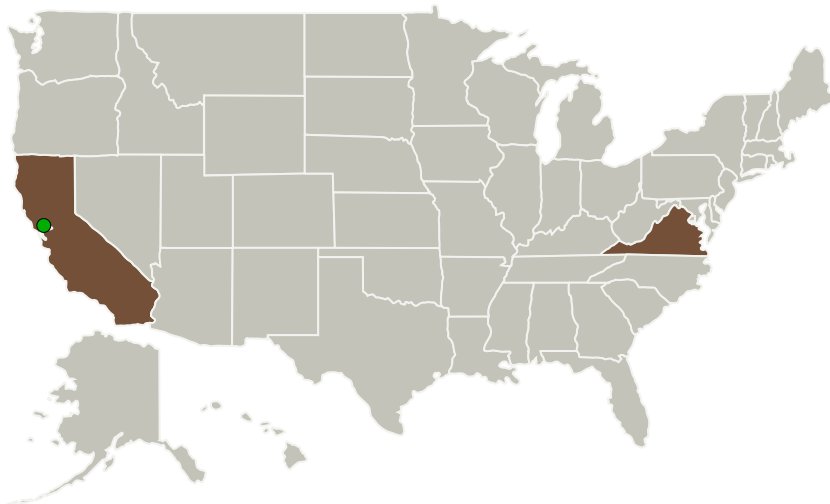
Completed Technology Project (2017 - 2017)



## Project Introduction

Similar to how the FAA's Terminal Flight Data Manager will bring runway use configuration support to a large number of airports in the National Airspace System, there exists a need to support how controllers use capacity constrained arrival and departure fixes. This project will develop and validate the Transition Airspace Resource Manager (TARM) concept. The goal of TARM is to increase the efficiency with which capacity-limited transition fixes connecting the enroute and terminal airspaces are used in both clear and disruptive weather conditions, by proactively suggesting reroutes to balance arrival and departure demand across available fixes, relative to capacity, and temporarily reallocating fixes between arrivals and departures when extreme demand or weather conditions warrant. TARM uses stochastic weather and capacity forecasts. The TARM concept represents an important step toward Trajectory Based Operations by integrating a traffic management decision with individual flight trajectories, and applying a TBO paradigm in which arrival and departure flights are separated by trajectory rather than procedural airspace regions.

## Primary U.S. Work Locations and Key Partners



Transition Airspace Resource Management, Phase I Briefing Chart Image

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Organizations Performing Work	Role	Type	Location
Mosaic ATM, Inc.	Lead Organization	Industry	Leesburg, Virginia
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Virginia

## Project Transitions

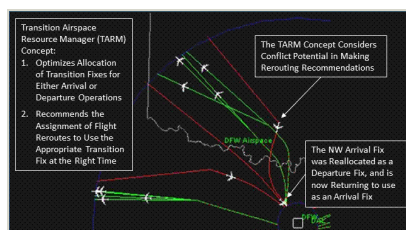
▶ **June 2017:** Project Start

✓ **December 2017:** Closed out

## Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/138692>)

## Images



## Briefing Chart Image

Transition Airspace Resource Management, Phase I Briefing Chart Image

(<https://techport.nasa.gov/image/127546>)

## Organizational Responsibility

## Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

## Lead Organization:

Mosaic ATM, Inc.

## Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

## Program Director:

Jason L Kessler

## Program Manager:

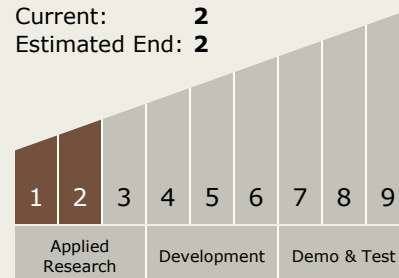
Carlos Torrez

## Principal Investigator:

Stephen Atkins

## Technology Maturity (TRL)

Start: **1**  
Current: **2**  
Estimated End: **2**



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## Technology Areas

### Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - └ TX16.3 Traffic Management Concepts

## Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System